

BRAYAN GONZÁLEZ-HERNÁNDEZ

CONTACT INFORMATION



EDUCATION

- Nov. 2018–currently* **Sapienza Università di Roma, Italy**
Doctor of Philosophy (PhD) Student, Transportation Engineering
Fields: *Road Safety, Sustainable Mobility, Transport Planning and Policy*
Thesis: Development of Simplified Road Assessment Programme Methodology
Tutor: Prof. Luca Persia – Cotutor: Dr. Davide Shingo Usami
- Sep. 2016–Feb. 2018* **Universitat Politècnica de València, Spain**
Master's Degree (MSc), Transportation, Land and Urban Planning with Honors. Thesis:
Speed prediction models for trucks on horizontal curves and tangents of two-lane rural roads. GPA: 8.8/10
- Jan. 2014–May 2015* **Pontificia Universidad Javeriana, Colombia**
Post-graduate Diploma (Specialist), Local Government and Public Management. GPA: 4.4/5.0
- Ago. 2005–Nov. 2010* **Universidad de Ibagué, Colombia**
Bachelor of Engineering (BEng), Civil Engineering. GPA: 4.1/5.0

ACADEMIC EXPERIENCE

- Nov. 2018–currently* **Graduate Research Assistant** for Prof. Luca Persia and research activities on Transportation and Road Safety at the Research Center for Transport and Logistics (CTL), Sapienza Università di Roma, Italy
- Mar. 2018–Feb. 2019* **Research Fellow** Collaboration in research activities on Highway Design and Road Safety at the Highway Engineering Research Group (HERG), Universitat Politècnica de València, Spain
- Feb. 2017–Feb. 2018* **Graduate Research Assistant** for Prof. Alfredo García and research activities on Highway Design and Road Safety at the Highway Engineering Research Group (HERG), Universitat Politècnica de València, Spain

TEACHING EXPERIENCE

- Feb. 2019–currently* **Teacher Assistant** for Prof. Luca Persia, *Road Safety* (Graduate level), Sapienza Università di Roma, Italy
- Feb. 2019–currently* **Teacher Assistant** for Prof. Luca Persia, *Transport Policies* (Graduate level), Sapienza Università di Roma, Italy
- Aug. 2007–Nov. 2009* **Course Assistantship** for Prof. Paola Tibaquirá. *Hydraulic Laboratory* (Undergraduate level), Universidad de Ibagué, Colombia

PROFESSIONAL EXPERIENCE

- Jan. 2020–Currently* *CTLup srl, ITALY*
Transport Consultant. Research, Consultant and Project Management activities on Transportation, Road Safety and Mobility. Assignments Include: Literature reviews; write, review, and critique: proposals, research plans, and final reports; conceptualize and write work plans; manage project activities and execution of research plan; analyze data; organize, attend, and participate in project meetings and; present research findings
- Jun. 2018–Oct. 2018* *NATIONAL FEDERATION OF COFFEE GROWERS OF COLOMBIA*
Highway Engineer. Coordinate of the construction process of the two-lane rural roads in 12 towns in the Cauca Region, under the OCAD-PAZ project.
- Nov. 2010–Jul. 2011* *NATIONAL FEDERATION OF COFFEE GROWERS OF COLOMBIA*
Road Construction Supervisor. Control and supervise the construction process of the two-lane rural roads in the southern Tolima Region, under the Vías para la Paz (Rural Roads for Peace) project.
- Jan. 2012–Jul. 2015* *DOLORES TOWN COUNCIL, COLOMBIA*
Secretary of Infrastructure and Urban Planning. Coordinate the formulation and elaboration of the master plan of the municipality with the different actors involved in the process. Prepare the technical specifications and budgets of the infrastructure projects for contracting purposes.

FUNDED PROJECTS

- May. 2021- currently* *PANACEA*
Transport Consultant. Practical and Effective tools to monitor and Assess Commercial drivers' fitness to drive (PANACEA). The project will design, develop and test a holistic driving ability assessment system for commercial drivers to be used pre-driving, during driving and at the roadside, paired with cloud-based countermeasure and coaching solutions. In order to achieve this, PANACEA will create driver-oriented, health-based, touchless, and Use Case (UC) driven health monitoring and assessment solutions capable of detecting alcohol, licit (barbituric), illicit (methadone replacement) drugs, fatigue, stress, and cognitive load. Funding entity: The European Commission. Duration: May. 2021-May. 2024
- Oct. 2020- currently* *DRIVE TO THE FUTURE*
Transport Consultant. Drive2theFuture develops training, HMI concepts, incentives policies and other cost efficient measures to promote and then to comparatively assess several alternative connected, shared and automated transport Use Cases for all transport modes and with all types of users (drivers, travelers, pilots, VRUs, fleet operators and other key stakeholders), in order to understand, simulate, regulate and optimize their sustainable market introduction; including societal awareness creation, acceptance enhancement and training on use. Funding entity: The European Commission. Duration: May. 2019-Apr. 2022
- Sep. 2020- currently* *HEALTHY COLD LOGISTICS (HCL)*
Transport Consultant. HCL aims to provide solutions to the Cold Logistics segment, and in particular to all WAREHOUSE activity managers (whether production or distribution) by addressing some key factors that the market requires: Modular, portable transport units, adaptable and "intelligent"; automation of some loading / unloading / picking phases; transparency of information during the transport chain; BIG DATA analysis for optimisation; automatic systems for product handling between areas at different temperatures, quality of work environments and; optimisation of flows and costs. Funding entity: Ministry of Economic Development of Italy. Duration: Sep. 2020-Aug. 2022

<i>Jan. 2020- currently</i>	<p><i>SHOW</i> Transport Consultant. SHared automation Operating models for Worldwide adoption (SHOW) project aims to support the migration path towards effective and persuasive sustainable urban transport through technical solutions, business models and priority scenarios for impact assessment, by deploying shared, connected, electrified fleets of autonomous vehicles in coordinated Public Transport (PT), Demand Responsive Transport (DRT), Mobility as a Service (MaaS) and Logistics as a Service (LaaS) operational chains in real-life urban demonstrations all across Europe. Funding entity: The European Commission. Duration: Jan. 2020-Jan. 2024</p>
<i>Sep. 2020- currently</i>	<p><i>ITALIAN NATIONAL ROAD SAFETY PLAN – HORIZON 2030</i> Road Safety Specialist. The study seeks to prepare the National Road Safety Plan of Italy for the decade 2021-2030. Based on the results of the National Road Safety Plan Horizon 2020 and the policy orientations on road safety of the European Commission, the objective is to review and update the strategies and objectives in terms of road safety at the national level with a long-term horizon. Funding entity: Ministry of Infrastructure and Transport of Italy. Duration: Sep. 2020-Jun. 2021</p>
<i>Mar. 2020- currently</i>	<p><i>MOBILITY MANAGEMENT AND OPTIMIZATION PLAN FOR THE REGIONAL ROAD NETWORK MANAGED BY ASTRAL</i> Transport Consultant. The project seeks to design and develop procedures that are capable of defining: a supply model (transport characterization of the geo-referenced road graph), representative of the main road network of Lazio; a mobility demand model, with reference to the zoning level defined for the Lazio road network; a reconstruction of the O / D matrix and calibration of the transport model through the interrelation between supply and demand; a hierarchical classification of roads and sections in relation to their functional importance and service level; creation of specific integrated software for data transformation and simulation, with map representations of dedicated layers and graphs for the representation of all the different analyzes and related results of the project. Funding entity: Azienda Strade Lazio (ASTRAL). Duration: Mar. 2020-currently</p>
<i>Sep. 2019- currently</i>	<p><i>ESRA</i> Researcher. E-Survey of Road user's Attitudes. Aim of the project is to provide scientific support to road safety policy making at the national and international levels. By using a uniform sampling method and an identical questionnaire, comparability of results across all participating countries is assured. Funding entity: Joint international initiative of research organizations and road safety institutes. Duration: Jun. 2015-currently</p>
<i>Jun. 2020- May 2021</i>	<p><i>IMPLICATIONS OF THE AFRICAN CONTINENTAL FREE TRADE AREA FOR DEMAND OF TRANSPORT INFRASTRUCTURE AND SERVICES</i> Transport Consultant. The objectives of the project are: Forecast of demand for different modes of transport as a result of AfCFTA; estimates of infrastructure investment requirements for different modes of transport; estimates of the impact of improvements in transport infrastructure and services on the volume of intra-African trade; and forecast of the demand of equipment for different modes of transport - road (trucks), railway (rolling stock), air (aircraft), and maritime (ships). Funding entity: United Nations Economic Commission for Africa (UNECA). Duration: Jun. 2020-May. 2021</p>
<i>Jan. 2020- Mar. 2020</i>	<p><i>PILOT STUDY TO COLLECT MORE ROBUST ACCIDENT DATA FOR SIERRA LEONE</i> Road Safety Engineer. The study aims to set up a methodology for road traffic crash data collection using sample data on a pilot basis, and to develop and implement an electronic data management system for road traffic crash data storage, analysis and retrieval for Low Volume Roads. Funding entity: ReCAP – Ukaid. Duration: Feb. 2018-Aug. 2018 / Jan. 2020 – Mar. 2020</p>

- Nov. 2018–Sep. 2019 **SAFERAFRICA**
Road Safety Specialist. SaferAfrica project aims at establishing a Dialogue Platform between Africa and Europe focused on road safety and traffic management issues. It will represent a high-level body with the main objective of providing recommendations to update the African Road Safety Action Plan and the African Road Safety Charter, as well as fostering the adoption of specific initiatives, properly funded. Funding entity: The European Commission. Duration: Oct. 2016-Sep. 2019
- Nov. 2018–Jul. 2019 **ROAD SAFETY ASSESSMENT IN MOZAMBIQUE & LIBERIA**
Road Safety Engineer. Development of new simplified methodology on road safety assessment using automated image analysis and pilot assessment study of national highways in Mozambique and Liberia. Funding entity: The World Bank. Duration: Jan. 2018-Jul. 2019
- Feb. 2017–Feb. 2018 **CASEFU**
Researcher. Empirical study of the functionality and safety of two-lane rural roads. Funding entity: Spanish Ministry of Economy, Industry, and Competitiveness and the European Social Fund. Duration: Jan. 2014-Dec. 2016

ARTICLES IN JOURNALS

- Usami, D.S., **González-Hernández, B.**, Persia, L., Kunsoa, N. B., Meta, E., Saporito, M. R., Schermers, G., Carnis, L., Yerpez, J., Bouhamed, N., Cardoso, J., Kluppels, L., & Vandemeulebroek, F. (2020). Defining suitable Safe System projects: the experience of the SaferAfrica project in five African countries. *Research IATSS*, <https://doi.org/10.1016/j.iatssr.2021.08.001>
- González-Hernández, B.**, Meta, E., Persia, L., Usami, D.S., & Cardoso, J. (2021). Development of a methodology to transfer road safety good practices in African countries. *Advances in Transportation Studies*, 55, 121-136.
- González-Hernández, B.**, Usami, D. S., Prasolenko, O., Burko, D., Galkin, A., Lobashov, O., & Persia, L. (2020). The driver's visual perception research to analyze pedestrian safety at twilight. *Transportation Research Procedia*, 45, 827-834.
- González-Hernández, B.**, Llopis-Castelló, D., & García, A. (2020). Operating speed models for heavy vehicles on tangents of two-lane rural roads. *Advances in Transportation Studies*, 50, 5-18.
- Persia, L., **González-Hernandez, B.**, Carroccia, R., Saporito, M. R. and Shingo Usami, D. (2019). Lo sviluppo dei sistemi di trasporto stradale e dell'incidentalità nei paesi a basso e medio reddito [Development of road transport systems and road traffic crashes rates in developing countries]. *Methodology & Education for Clinical Innovation*, 27(2), 81-87.
- Llopis-Castelló, D., **González-Hernández, B.**, Pérez-Zuriaga, A.M., & García, A. (2018). Speed prediction models for trucks on horizontal curves of two-lane rural roads. *Transportation Research Record*, 2672(17), 72-82.

CONFERENCE PAPERS

- González-Hernández, B.**, Usami, D. S., & Persia, L. (2020). Road safety issues addressed by Africa Road Safety Plan: Are still relevant? *World Multidisciplinary Civil Engineering-Architecture-Urban Planning Symposium-WMCAUS*, Prague. September 1-5, 2020.
- Usami, D.S., **González-Hernández, B.**, Persia, L., Kunsoa, N. B., Meta, E., Saporito, M. R., Schermers, G., Carnis, L., Yerpez, J., Bouhamed, N., Cardoso, J., Kluppels, L., &

Vandemeulebroek, F. (2020). Defining suitable Safe System Projects in Africa. *World Multidisciplinary Civil Engineering-Architecture-Urban Planning Symposium-WMCAUS*, Prague. September 1-5, 2020.

González-Hernández, B., Meta, E., Persia, L., Usami, D.S., & Cardoso, J. Identifying barriers to the potential implementation of road safety good practices in Africa. *99th Annual Meeting of Transportation Research Board*, Washington, DC. January 12-16, 2020.

Usami, D.S., Kunsoa, N. B., Persia, L., **González-Hernández, B.**, Meta, E., Saporito, M. R., Schermers, G., Carnis, L., Yerpez, J., Bouhamed, N., Cardoso, J., Kluppels, L., & Vandemeulebroek, F. Developing Safe System Projects in Africa. *26th World Road Congress - PIARC*, Abu Dhabi, UAE. October 6-10, 2019.

González-Hernández, B., Llopis-Castelló, D. & García, A. Operating Speed models for heavy vehicles on tangents of Spanish two-lane rural roads. *98th Annual Meeting of Transportation Research Board*, Washington, DC. January 13-17, 2019.

Llopis-Castelló, D., **González-Hernández, B.**, Pérez-Zuriaga, A.M. & García, A. Speed prediction models for trucks on horizontal curves of two-lane rural roads. *97th Annual Meeting of Transportation Research Board*, Washington, DC. January 7-11, 2018.

BOOKS & CHAPTERS

Sicurezza dei Trasporto Stradale. Sistemi Informativi di Supporto (*Safety in Road Transport. Support Information Systems*) (2019). Chapter authors: Persia, L., & **González-Hernández, B.** In Sicurezza nei Trasporti. Teoria e gestione (*Safety in Transportation. Theory and management*). Editor(s): Malavasi, G. Egaf Edizioni. ISBN: 978-88-8482-971-9.

SERVICE

2019–currently

Journal Peer Reviewer, Transportation Research Record (TRR); Advances in Transportation Studies (ATS)

2019–currently

Conference Peer Reviewer, Transportation Research Board (TRB); 8th Road Safety and Simulation Conference (RSS2022)

FELLOWSHIPS AND AWARDS

Nov. 2018–currently

Scholarship on doctoral studies, Sapienza Università di Roma, Italy

COURSES AND CONTINUING EDUCATION

Leveraging Urban Mobility Disruptions to Create Better Cities. Online course. MITx, 40 Hr., 2020. **BIGRS IndiaRAP Webinar: World Bank and iRAP helping save lives on Indian roads.** Online course. BIGRS and IndiaRAP, 16 Hr., 2020. **Road Traffic Injury Prevention and Control in Low- and Middle-Income Countries.** Online course. The Johns Hopkins International Injury Research Unit, 35 Hr., 2019. **Road Safety in LATAM: from theory to action.** Online course. IDB, 35 Hr., 2019. **Leadership in the Public Policy Process.** Federación Colombiana de Municipios and The Leadership Institute, New York, Philadelphia and Washington, USA. 30 Hr. 2015. **Urban Development and Housing in Latin America,** online course. IDB, 36 Hr. 2015. **Diploma in State Contracting.** Pontificia Universidad Javeriana, Colombia. 116 Hr., 2011. **Costs and Budgets for Buildings,** online course. SENA. 40 Hr., 2009. **Microsoft Excel application in topographic surveys,** online course. SENA. 40 Hr., 2009. **Environmental Impact Assessment,** online course. IDB, 20 Hr., 2008

ACTIVITIES

Associations & Groups **Member** of the European Conference of Transport Research Institutes (ETRIC) Thematic Group on Safety. Jan. 2021-Currently.

Member of the International Transport Forum (ITF) and World Bank (WB) Working Group on Implementing the Safety System approach. Apr. 2020-Currently.

Friend of the TRB Committees: Transportation Safety Management Systems (ANB10), and Transportation in the Developing Countries (ABE90). Jan. 2020-Currently.

Member of the Transport and Accessibility in Low Income Communities – Latin America Chapter (INTALInC-LAC). Sep. 2019-Currently.

Member of the Colombian Academic Network of Mobility (RAM) Thematic Group on Safety in Mobility (CTP 7). Jan. 2018-Currently.

Member of the Colombian National Professional Engineering Council (COPNIA). Dec. 2010-Currently.

Member of the Colombian National Association of Civil Engineering Students (ANEIC). Nov. 2007-Mar. 2010. **Academic Director** of ANEIC. Apr. 2009-Mar. 2010

Co-founder and Member of the Tolimense Association of Civil Engineering Students (ATEIC). Sep. 2007-Nov. 2010. **Director** of ATEIC. Sep. 2008-Sep. 2009. **Deputy Director** of ATEIC. Sep. 2007-Sep. 2008. **Director** of the I Seminario Nacional de Avances y Tecnologías en Ingeniería Civil, Colombia, 2010

Boards of Directors Dolores Public Utility Company – SERVIDOLORES E.S.P., Colombia. Jan. 2012–Jul. 2015

Political **Programmatic advisor volunteer**, Colombia presidential campaign of Sergio Fajardo. Mar. 2017–May 2018. **Campaign manager**, Dolores mayoral campaign of Nictor Trujillo, Colombia, Jul. 2015–Oct. 2015. **Programmatic advisor volunteer**, Dolores mayoral campaign of Carlos Alberto Torres, Colombia, May 2011–Oct. 2011. **Youth Coordinator of Tolima Region**, Colombia presidential campaign of Antanas Mockus & Sergio Fajardo, Nov. 2009 – Jun. 2010

Interest Traveling, Running, Cultures and Cities. Write and maintain my personal website: www.elmultimodal.wordpress.com

LANGUAGES

Spanish, native
 English, professional proficiency
 Italian, professional proficiency

- Last update: October, 2021